



EQ1100 Signals and Systems, part II 7.5 credits

Signaler och system, del II

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for EQ1100 valid from Autumn 2007

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Electrical Engineering, Technology

Specific prerequisites

For single course students: General admission requirements, 60 credits and documented proficiency in English B and Swedish B or equivalent

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The aim is to provide basic knowledge about continuous-time and discrete-time linear systems and their dynamical properties.

After completing the course You should be able to

- use mathematical transform methods to analyze linear systems.
- understand the concepts of poles and zeros and their relation to impulse responses, frequency functions and stability.
- use MATLAB for analysis of signals and simple filter design.

Course contents

Linear systems: System properties (stability, causality, time-invariance), block diagrams, impulse response, convolution.

Frequency description: Frequency response, frequency function, filtering.

Sampled systems.

Course literature

One of the following 2 books:

- H.P. Hsu, “Shaum’s Outline of Signals and Systems”, McGraw-Hill, 1995, ISBN 0-07-030641-9
- B.P. Lathi, “Linear Systems and Signals”, 2nd edition, Oxford University Press, ISBN 0-19-515833-4

Examination

- LAB1 - Laboratory Work, 0.5 credits, grading scale: P, F
- LAB2 - Assignment, 1.0 credits, grading scale: P, F
- TEN1 - Examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Written exam (TEN1; 6 ECTS).

Laboratory exercise (LAB1; 0,5 ECTS).

Homework problem (LAB2; 1 ECTS).

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.